

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE J	PAGE 1	OF PAGES
2. AMENDMENT/MODIFICATION NO. 0001		3. EFFECTIVE DATE 9-Apr-2001	4. REQUISITION/PURCHASE REQ. NO. W807PM-0347-1422	5. PROJECT NO. <i>(If applicable)</i>	
6. ISSUED BY VBURG CONSOL CONTRACTING OFC 4155 CLAY STREET VICKSBURG MS 39183-3435		CODE DACW38	7. ADMINISTERED BY <i>(If other than Item 6)</i> See Item 6		
8. NAME AND ADDRESS OF CONTRACTOR <i>(No., street, county, State and ZIP Code)</i>			(√)	9A. AMENDMENT OF SOLICITATION NO. DACW38-01-B-0018	
			(X)	9B. DATED <i>(SEE ITEM 11)</i> 5-Apr-2001	
				10A. MODIFICATION OF CONTRACTS/ORDER NO.	
				10B. DATED <i>(SEE ITEM 13)</i>	
CODE		FACILITY CODE			

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☒ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(√)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: <i>(Specify authority)</i> THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES <i>(such as changes in paying office, appropriation date, etc.)</i> SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER <i>(Specify type of modification and authority)</i>

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Reference Solicitation No. DACW38-01-B-0018, for Lease of One Cutterhead, Hydraulic, Pipeline Dredge (Not Less Than 20-Inch Diameter) Fully Operated with Attendant Plant, and Personnel, with a Draft Not to Exceed 9 Feet, for Construction and Maintenance Dredging within the Vicksburg and adjacent Districts, scheduled bid opening 12 Apr 2001 at 1400 hours. The solicitation is amended as follows:

BIDDING SCHEDULE

Page 4 is replaced with revised Page 4.

SECTION 02482 is replaced in its entirety.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER <i>(Type or print)</i>		16A. NAME AND TITLE OF CONTRACTING OFFICER <i>(Type or print)</i>	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
_____ <i>(Signature of person authorized to sign)</i>		BY _____ <i>(Signature of Contracting Officer)</i>	

OR

0001C	LEASE OF ONE CUTTERHEAD HYDRAULIC, PIPELINE DREDGE (NOT LESS THAN 24- INCH DIAMETER), WITH ATTENDANT PLANT, AND WITH A DRAFT NOT TO EXCEED 9 FEET, AND WITH UNDERWATER PUMP				
0001CA	FIRST 833 HOURS	833	HR	\$ _____	\$ _____
0001CB	OVER 833 HOURS	833	HR	\$ _____	\$ _____
0001D	MOBILIZATION AND DEMOBILIZATION	1	LS	FOR	\$ _____
0001F	REMOBILIZATION	1	EA	FOR	\$ _____
0001G	TOWING SERVICE UPSTREAM	100	MI	\$ _____	\$ _____
0001H	TOWING SERVICE DOWNSTREAM	100	MI	\$ _____	\$ _____
TOTAL					\$ _____

NOTES:

THE SF1442, THE BIDDING SCHEDULE, AND THE SECTION 00600 (REPRESENTATIONS AND CERTIFICATIONS) MUST BE ACCURATELY COMPLETED AND RETURNED WITH YOUR BID OR IT MAY BE REJECTED AS NONRESPONSIVE.

LACK OF REGISTRATION IN THE CCR DATABASE WILL MAKE AN OFFEROR INELIGIBLE FOR AWARD. SEE CONTRACT CLAUSE 252.204-7004 ENTITLED "REQUIRED CENTRAL CONTRACTOR REGISTRATION (MAR 1998)."

(a) Bidders shall furnish unit prices for items listed on the schedule of bid items which require unit prices. If the bidder fails to insert a unit price in the appropriate blank for required items, but does furnish an extended total or an estimated amount for such items, the Government will deem his unit price to be the quotient obtained by dividing the extended estimated amount for the line item by the quantity. **IF THE BIDDER OMITTS BOTH THE UNIT PRICE AND THE EXTENDED ESTIMATED AMOUNT FOR ANY ITEM, THE BID WILL BE DECLARED NONRESPONSIVE.**

(b) All quantities shown on the BIDDING SCHEDULE are estimated quantities except when the unit of measure is shown as "lump sum", "job" or "each".

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SECTION 02482

DREDGING

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ENGINEERING MANUALS (EM)

EM 385-1-1 (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

1.2 PAYMENTS

1.2.1 Lease Time (PAYMENT ITEMS 0001A, 0001B, or 0001C)

Payment will be made as bid, subject to the provisions as set forth below. Payment will be based on Item 0001A, 0001B, or 0001C until the sum of the Effective Time (100% payment) and 80 percent of the Non-Effective Time (80% payment) is greater than the "A" item hours. Payment Item 0001A, 0001B, or 0001C will be applicable for all time over the "A" item hours.

a. Effective Time

The following will be considered effective time and will be paid at the contract price per hour.

(1) Pump Time

Actual time of dredging when the dredge is under operation, with the cutterhead moving material, and such material is being passed through the pipe line.

(2) Passing Vessels

Time lost while making openings in floating discharge pipe lines or swinging to one side of the channel to allow vessels to pass. The Contractor shall make such openings upon signal of any vessel or craft desiring to pass.

(3) Washing Operations

Actual time spent in washing operations and repositioning underwater pipeline when discharge is used to flush underwater material and debris from areas that cannot be dredged. Such areas are gate recesses and sills at lock chambers, and underneath docks

or piers.

b. Non Effective Time

The following will be considered non-effective time and will be paid at eighty (80) percent of the contract price per hour:

(1) Prepare to Move, Move Same Job, Locking Through

Actual time lost up to, but not more than four (4) hours for each of the following: preparing to move from one job to another, preparing the dredge for pumping upon arrival at a new job, or upon startup at the first work site or start-up after suspension, and locking the dredge and attendant plant through a lock. Actual time lost up to, but not more than 6 1/2 hours for moving from one location to another on the same job. Moves of less than 20 miles will be considered "same job" provided the dredge is moved at least 3 mph and is fully crewed. In instances where the floating pipeline length exceeds 1000 feet up to two (2) additional hours will be allowed in preparing to dredge for each 1000 feet of additional pipeline.

(2) Move Anchors, Handle Pipe, Change Wires

Actual time lost due to moving and changing swing anchors, changing swinging wires to previously prepared pendants, or making changes in discharge lines such as adding pontoons or shore pipe as may be necessary. Also actual lost time due to failure of retaining dikes, spillboxes and outfalls through no fault of the Contractor. In the latter case, the Contractor will furnish all necessary equipment and personnel to make repairs.

(3) Clean Pump, Wash Pipeline

Actual time lost due to removal of logs, driftwood, rocks, etc., from the pump, pipeline and cutterhead or removal of drift from the pontoon line, and necessary time lost due to washing out pipe line before handling. Also, actual time lost up to, but not more than four hours due to dredge shutdowns authorized by the Contracting Officer to replace the pump impeller with either different diameter impeller or an impeller with a different number of vanes, or installing or replacing a knife in the pump. Also, actual time lost up to but not more than one hour due to dredge shutdowns authorized by the Contracting Officer to change the dredge cutterhead to a cutterhead of a different type. The intent of payment for delays authorized by the Contracting Officer to permit the Contractor to change pump impellers, install knives, and dredge cutterheads is to obtain the greatest efficiency of operations under changing conditions, such as varying material, length of line, etc. Payment will not be made under this paragraph for replacing worn out impellers and/or dredge cutterheads that have lost their efficiency because of wear.

(4) Prepare for Suspension

When operations are suspended under the provisions of Section 01000 GENERAL CONTRACT REQUIREMENTS, paragraph DURATION OF CONTRACT, subparagraph "b.", payment will continue at eighty (80) percent of the contract price per hour for a period not to exceed 4 hours to allow the Contractor to prepare dredge, pipeline, and attendant plant for towing or for lay-up at a nearby site. The dredge and attendant plant should be tied up in such a manner and location so as not to be a hindrance to navigation. Lay-up in the immediate vicinity of the Locks and Dams on the Red River is a hazard to navigation. The Contractor will be paid up to 8 hours of non-effective (80%) time for moving the dredge and attendant plant to the nearest location which is not a hazard to navigation.

(5) Short Term Standby

Actual time lost due to dredge standby time at the direction of the Contracting Officer. This is to provide for situations, caused by conditions beyond the Contractor's control and which usually delay operations only a few hours (but could be several days). Examples of this type condition are as follows: Upon arrival at the job site the dredge is unable to begin dredging because another dredge or vessel is temporarily in the way. Insufficient notice was given for constructing a shoreline and the dredge must wait for completion of the shoreline. This paragraph does not cover the temporary suspensions provided for under Section 01000 GENERAL CONTRACT REQUIREMENTS, paragraph DURATION OF CONTRACT.

(6) Weather

Actual time lost due to inclement weather (fog, wind, thunderstorms, etc.) on an assignment or while in route between assignments.

1.2.2 Lost Time

Payment will not be made for:

- a. Lay time upon completion of an assignment or lay time after arrival at location of a new assignment when such time is not incurred at the direction of the Contracting Officer; or when through negligence of the Contractor the necessary equipment is not available or in operating condition at the new assignment, or for time during suspension of operations, as provided in Section 01000 GENERAL CONTRACT REQUIREMENTS, paragraph DURATION OF CONTRACT, subparagraph "b".
- b. Time lost due to shutdown for the repair or the replacement of worn out or unserviceable equipment and time lost due to pulling a line together when the joints open, replacing damaged shore pipe or pontoons, unless shore pipe is damaged by caving bank or pontoons are damaged by drift through no fault or negligence of the Contractor.
- c. Time during which the dredge is engaged in removing misplaced

material and dredging time lost due to removal of obstructions as required in Section 00800 SPECIAL CONTRACT REQUIREMENTS, paragraph MISPLACED MATERIALS.

d. Time during which the dredge is engaged in dredging for others, time being computed from time the dredge shuts down until the dredge is back in position and material is being passed through the pipeline.

e. Time lost due to shutdown ordered by the Contracting Officer due to nonconformance to EM 385-1-1. (See Clause ACCIDENT PREVENTION of the Contract Clauses and safety requirements of these specifications.)

f. Time lost due to insufficient crew size and the inability to perform efficiently simultaneous dredging operations and on-shore disposal operations as determined by the Contracting Officer or his representative. (See paragraph CREW.)

g. Time lost in priming main dredge pump that is in excess of five (5) minutes.

h. Time that is in excess of any of the maximum times set forth above under paragraph LEASE TIME (PAYMENT ITEMS 0001A, 0001B, or 0001C), subparagraph NON EFFECTIVE TIME.

i. When the dredge is shut down for any of the reasons as set forth above, the ensuing time shall remain under that classification until the cause of the shutdown has been removed and no claim shall be allowed for other work performed during that time unless the Contracting Officer orders the dredge and attendant plant to move to a new location.

1.2.3 Mobilization and Demobilization (PAYMENT ITEM 0001D)

a. All costs connected with the mobilization and demobilization of all of the Contractor's dredging plant and equipment will be paid for at the contract lump sum price. Sixty percent (60%) of the lump sum price will be paid to the Contractor upon completion of his mobilization at the work site. The remaining forty percent (40%) will be paid upon completion of demobilization and may be included in the final payment. Suspension of work by the Government during the contract period will not constitute demobilization.

b. In the event the Contracting Officer considers that the amount in this item (60%), which represents mobilization, does not bear a reasonable relation to the cost of the work in this contract, the Contracting Officer may require the Contractor to produce cost data to justify this portion of the bid. Failure to justify such price to the satisfaction of the Contracting Officer will result in payment of actual mobilization costs, as determined by the Contracting Officer at the completion of mobilization. The remainder of this item will be paid in the final payment under this contract.

c. Payments for mobilization of the dredging plant and equipment at a point of delivery other than the one specified in paragraph FIRST WORK

LOCATION will be determined and made as follows:

(1) For the purpose of determining payments, the Contractor's location of dredging plant will be that stated as the site of inspection indicated on the bid form.

(2) Payments will be subject to a decrease or increase depending on whether the new point of delivery is nearer or farther, to the Contractor's location of dredging plant, than the location specified in paragraph FIRST WORK LOCATION.

(3) The adjustment will be applied at the contract unit price for "Miles Moved Upstream" or "Miles Moved Downstream," as stated in paragraph MOVING BETWEEN ASSIGNMENTS below.

1.2.4 Remobilization (PAYMENT ITEM 0001~~EF~~)

When remobilization is ordered by the Contracting Officer after periods of suspension, the Contractor will be paid for remobilization at the contract unit price for this item. Payment for movement of the dredge to the site of remobilization will be computed based on the site of suspension.

1.2.5 Moving Between Assignments

When the dredge is moved from the point of delivery to jobs covered in these specifications or between jobs as directed by the Contracting Officer's Representative, downstream moves will be paid at a rate of 20% of the applicable hourly rate (0001A, 0001B, or 0001C), per navigation mile. Upstream moves will be paid at a rate of 30% of the applicable hourly rate (0001A, 0001B, and 0001C), per navigation mile. The moves will be performed by the Contractor's vessels.

1.2.6 Dredge Towing Service (PAYMENT ITEMS ~~0001FG~~ and 0001H)

When directed by the Contracting Officer, the Contractor shall furnish an additional towboat of not less than 1800 HP to move the dredge from one location to another. Payment for this service will be at the contract Bid Price per Navigation mile based on Navigation charts and rounded to the nearest mile. This payment will be in addition to that specified in paragraph MOVING BETWEEN ASSIGNMENTS above. The Contractor will be given at least 24 hour notice of the requirement for this service.

1.2.7 Deductions for Inoperative Plant

In accordance with paragraph INOPERATIVE PLANT, the Contractor's daily payments will be reduced for each full day, beginning at midnight, in which the plant is inoperative. Partial days will not be counted. The following amounts will be deducted for inoperative attendant plant:

Dredge Tender	\$700.00 per day
Inspector's Skiff	\$300.00 per day
GPS Positioning System	\$200.00 per day

1.2.8 Deductions for Absent Crew Members

In accordance with paragraph MINIMUM CREW, \$200.00 will be deducted from the Contractor's payments for that day for each absent crew member.

1.3 GENERAL

It is the intent of these specifications to secure for the Government the lease and operation of a cutterhead hydraulic pipeline dredge, including all attendant plant, conforming to the Technical Specifications, complete in all respects.

1.4 WORK LOCATIONS

1.4.1 First Work Location

The first location of work under this contract is expected to be in the vicinity of Mile 35.0 on the Red River.

1.4.2 Other Locations

It is possible that dredging at other locations in the Vicksburg District or other Districts adjacent to the Vicksburg District will become necessary. In such case, that work may be performed under this contract. The Government will direct the order of work. The Contractor should take notice that, if dredging is needed in Districts adjacent to the Vicksburg District, such work shall be performed under this contract and its terms and conditions.

1.4.3 Work by Others

This contract does not guarantee the successful Contractor all the work on the above waterways and work done by others on these waterways shall not constitute the basis for a claim by the Contractor.

1.4.4 Varying Conditions

Line lengths, disposal lift heights, and disposal techniques on the above projects may vary from those set forth above.

1.5 CREW

The Contractor shall furnish and pay all necessary crew and supervisory personnel required for the satisfactory and efficient operation of the dredge and attendant plant. The crew shall be able to clear pump or suction and add or remove floating or shore pipeline simultaneously.

1.5.1 Minimum Crew

As a minimum, the following personnel are required for the dredge to comply with the contract. At the discretion of the Contracting Officer the dredge may be allowed to operate if crew members are absent, subject to the conditions below and the deductions specified in paragraph DEDUCTIONS FOR ABSENT CREW MEMBERS. The dredge will not be allowed to operate unless at least six crew members are present who are qualified to fill the six

positions listed in "b. SHIFT CREW" below.

a. DAY CREW

- *1 Captain
- *1 Deck Captain
- 1 Chief Engineer
- 1 Clerk
- 1 Motorboat Operator
- 1 Welder

* Either the Captain or Deck Captain shall be present each day.

b. SHIFT CREWS

In addition to the Day Crew listed above, the Contractor shall provide two separate and fully manned shift crews for normal operation, with the following personnel present during each shift.

- 1 Leverman
- 1 Mate
- 2 Boat Operators
- 1 Engineer
- 2 Deckhands
- 1 Oiler

c. Single Shift Operation

When river conditions warrant, the Contracting Officer may authorize single-shift operation of the dredge. During single-shift operations, the mate, engineer, and oiler may be deleted from the shift crew without penalty. Only one shift crew is required for single-shift operations.

d. Objectionable Employees

The Contractor will be required to discharge any employee who, in the opinion of the Contracting Officer, is objectionable. This requirement shall not be made the basis of any claim for compensation or damages against the United States or any of its officers or agents.

1.5.2 Manning of Tank Barges

Tank barges need not be manned unless in the judgment of the Officer in Charge, Marine Inspection, United States Coast Guard, such manning is necessary for the protection of life and property and for the safe operation of the vessel; provided, however, that towing vessels, while towing barges which are not required to be manned, shall carry in the regular complement of the towing vessel and shall have on board at all times while towing at least one licensed officer or certified tankerman. (CG 123, paragraph 31.15-5, April 1964.)

1.5.3 Fuel Transfer

Enough of the crew shall be on duty to perform transfer operations. In the case of unmanned barges, the owners or operators of such barges shall insure that a person holding a valid license as master, mate, pilot or engineer, or a certified tankerman is on duty to perform transfer operations. The licensed person or certified tankerman shall be considered the person in charge of the unmanned tank barge. (CG 123, paragraph 35.35-1, April 1964).

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 DREDGING EQUIPMENT

3.1.1 Size of Plant

The dredge shall be not less than 16 inch I.D. and meet the criteria as set forth in the table below. Dredges with greater discharge size, horsepower or output capacity than listed will be considered, however no consideration will be given to the extra size, horsepower or capacity. The discharge size will be considered to be the minimum diameter of either the pump discharge or discharge line, whichever is smaller.

SIZE OF DREDGE PUMP DISCHARGE (I.D.)	MINIMUM CONTINUOUS BHP CONNECTED TO DREDGE PUMP	MINIMUM CONTINUOUS BHP CONNECTED TO CUTTERSHAFT	MINIMUM OUTPUT PER PUMPING HOUR (CUBIC YARDS)
20"	1,200	200	627
24"	1,560	320	903
*24"	1,560	320	1,084 1,129

(* With underwater pump, at least 750 HP.)

3.1.2 Digging Configuration

The dredge ladder and spuds shall be constructed and configured so the dredge can dig material to a depth of 30 feet below the water surface without exceeding a ladder angle of 45 degrees from horizontal. It shall be able to make a 150 foot bottom width cut in a single pass at a 30 foot water depth without exceeding a swing angle of 45 degrees to either side of the cut centerline. Spuds shall be capable of holding the dredge in place under the dredging conditions above in currents up to 7 feet per second. The dredge shall be capable of starting work and working efficiently in 10 feet of depth. The draft of the dredge shall not exceed 9 feet. The dredge shall be designed so that it can work efficiently and permit passage of other vessels while working in a 150 foot wide channel. A check (flap) valve shall be located on the dredge in the discharge line near the pump. The suction pipe shall have a device that will degas the dredged material.

3.1.3 Spare Parts

The Contractor shall always have available at least three interchangeable pump impellers and at least two serviceable basket-type cutterheads in the

sizes that can be accommodated by the pump to permit the dredge to work under varying conditions of length of discharge line and lift. Minimum production rate requirements stated in paragraph SIZE OF PLANT must still be met. Discharge line may vary from 300 feet to 6,500 feet in length, and the discharge lift may be as much as 35 feet.

3.2 ATTENDANT PLANT

Attendant plant shall include the following as minimum requirements and shall be composed of such fuel barges, tenders, floating discharge pipe, shore pipe, spill barges, derrick barges or anchor barges, water barges, and other attendant or auxiliary plant as may be required for dredging operations, whether or not items are specifically mentioned. The auxiliary and attendant plant shall be in good condition and of sufficient size and capacity to serve the dredging operation efficiently. No separate payment will be made for auxiliary or attendant plant. It will be considered as part of the dredging plant and shall always be in operating condition regardless of pay status of the dredge.

3.2.1 Pipeline Equipment

The following minimum pipeline equipment will be required:

- a. Three thousand five hundred feet of pontoon discharge pipeline with satisfactory pontoons, enough of which are equipped with winches to provide suitable anchorage for every 800 feet of floating line. Skidder barges may be substituted for winches on pontoon line.
- b. One shallow-draft spill barge with a maximum draft of 2 feet, equipped with pipe saddles to support 40 to 50 feet of shore pipe and a spoon-type spreader. This is to allow placement of material 20 to 30 feet beyond the water's edge.
- c. One swivel elbow with a two-drum power winch and two elbow pontoons with two-drum power winches on each. Three skidder barges with power winches and adequate fairleads or chocks may be substituted for power winches on elbow pontoons.
- d. A baffle plate for pumping overboard.

3.2.2 Tractor

The attendant plant shall include one crawler-type tractor (similar or equal to a Caterpillar D-5) with low ground pressure tracks or one four-wheel drive swamp buggy with a front mounted blade. The machine must be able to push over small willows and prepare steep river banks for shoreline connections.

3.2.3 Derrick

The Contractor shall furnish one derrick barge stiff leg A frame, with at least 30 foot boom length. The barge shall be at least 60 feet by 25 feet by 5 feet. Also one (1) derrick barge, gin pole turntable type, with at least 70 foot boom length, mounted on a barge at least 70 feet by 30 feet

by 4 feet, or a crane mounted on a barge capable of serving in that capacity.

3.2.4 Landing Barges

The Contractor shall furnish a landing barge or pontoon at each landing so safe passage of personnel can be accomplished in getting from shore to the boats. A walkway will be constructed in conformance with the requirements of Section 19.B of EM 385-1-1. The walkway with a handrail will be placed wherever the Contracting Officer determines the danger of slipping is present.

3.2.5 Tenders

The Contractor shall furnish two dredge tenders, each with an operator and at least one deckhand for each shift, for 24 hours operation per day. At least one tender shall work efficiently in as little as five feet of water and shall have not less than 300 continuous shaft horsepower. One tender shall have not less than 400 continuous shaft horsepower. Both tenders shall have sufficient freeboard to operate safely in strong current and shall be of twin screw shallow-draft construction. Tenders and operators shall meet all U.S. Coast Guard requirements for the areas in which work is performed.

3.2.6 Launch

The Contractor shall furnish one twin engine inspector's launch with a draft not to exceed two feet, with a minimum length of 19 feet and BIA rated for at least 130 horsepower. The boat should be of a cathedral hull design for use in layout work. The boat will be similar and equal to the Sea-Ark Little Giant, series manufactured by Sea-Ark Workboat Division, Monticello, AR. The cabin shall be fully enclosed with a front and rear door. The boat shall have polyurethane foam flotation installed and be certified by the Coast Guard or BIA for a capacity of five people including the operator for level flotation. This boat should be equipped with a sounding well and 12-volt D.C. electrical system for operation of a Government furnished Raytheon scroll-type sounding machine. An operator and a relief operator must be provided for operations of this vessel during daylight hours for sounding and general inspection duties. Any vessel not equipped or designed as specified above will not be accepted. The Contractor must have on the job site a spare motor and the necessary spare parts to keep the Inspector's launch in good operating condition. The Inspector's launch may be used by the Contractor when not needed by the inspectors, but must be made available for the inspector's use at any time.

3.2.7 Oil and Water Separator

The Contractor must have on the job site a U.S. Coast Guard approved multistage oil-water separator, and at least a 1,000 gallon waste oil tank for containment of oily bilge waste. This waste must be removed and disposed of by a licensed disposal facility.

3.2.8 Oil Containment Boom

The Contractor shall have on the job site at least 500 feet of floating oil containment "river boom". The boom shall have a weighted skirt which extends at least 12 inches into the water.

3.2.9 Volatile Fuels

The dredge tenders and other attendant plant requiring internal combustion engines for propulsion or auxiliary power requirements, except outboard motors, shall not be equipped with a type of engine requiring gasoline or other highly volatile fuels for operations.

3.2.10 Inoperative Plant

Attendant plant must be fully operational to comply with the contract. At the discretion of the Contracting Officer, the dredge may be allowed to continue to operate if some attendant plant is inoperative, subject to the deductions specified in paragraph DEDUCTIONS FOR INOPERATIVE PLANT

3.3 TECHNICAL EQUIPMENT

3.3.1 Production Monitoring Equipment

The dredge shall be equipped with microprocessor based devices to continuously display the following information on a video monitor and record time averaged data at intervals of not more than 15 seconds:

- a. Dredge pump vacuum and discharge pressure
- b. Dredge pump revolutions
- c. Cutterhead depth
- d. Current date and time

3.3.2 Depth Sounder

The Contractor shall provide a depth sounding device(s) capable of obtaining continuous depth sounding measurements in the area of the forward hull of the dredge. The depth sounder shall be accurate to +/- 0.5 feet. The depth sounder shall be electronically interfaced with the GPS positioning system. The data obtained by the depth sounding device(s) shall be displayed in the lever room of the dredge.

3.3.3 Positioning Equipment

The dredge shall be equipped with a microprocessor based electronic Differential Global Positioning System (DGPS) capable of providing 24 hour real-time latitude and longitude positioning of the dredge cutterhead within a tolerance of 5 feet. The system must be capable of accepting programmed waypoints, and plotting a course between waypoints. The system shall include a video monitor mounted in clear view of the dredge operator, a magnetic media recorder (3.5 inch floppy disk, IBM-compatible ASCII format), and a roll-chart track plotter to continuously position, trace and record the location of the cutterhead relative to both the cut centerline

and the beginning of the cut. Minimum system outputs shall include the following:

- a. Cutterhead position coordinates compatible with layout maps
- b. Cutterhead offset from the centerline of the cut
- c. Distance downline from beginning of the dredge cut
- d. Current date and time

The dredge shall be equipped with a gyro compass of such precision that dredging can be conducted using compass bearings when dredging by GPS is impossible. The Contractor shall also furnish swing charts that show the width of swing at various swing angles and digging depths.

3.3.4 Data Records

The Contractor shall provide daily reports of the above data for the previous 24 hour period on both 3.5 inch magnetic disk and roll chart paper. These records will become the property of the Government.

3.3.5 Radios

The Contractor shall furnish and maintain the following radio equipment throughout the period of the contract:

- a. Space for 24-inch wide by 41-inch high by 18-inch deep FM radio transceiver in the inspector's office on the dredge. A power source of 115 VAC+ 10 percent, 60 HZ, 5 AMP shall be provided for the transceiver.
- b. The Contractor shall furnish, maintain throughout the contract, and operate according to FCC regulations, VHF FM ship's radio transceivers on the dredge, tenders and survey skiff. Transceiver output shall be less or equal to 25 watts, and at least 15 watts on the maritime frequency at 156.800 (Channel 16). Transceiver output power shall be less or equal to 3 watts and at least 1.5 watts on the maritime frequency of 156.650 (Channel 67) MHz 16 F3 emission, with plus or minus 5 KHz at 100 percent modulation.
- c. The dredge shall be equipped with either a radio or telephone that shall be used to provide oral communications between the dredge operator and the shoreline crew at the point of discharge and any other locations on the job site where crew members are working and left without transportation to and from the dredge.
- d. The Government will furnish and install on the dredge a fully operable radio transceiver and antenna when the work is started. Any needed repairs to the radio during the term of the contract will be made by the Government. The Contractor shall remove the radio transceiver and antenna, and return it in good working order to the Government when the work is terminated. Communications on this frequency shall be limited to this contract.

-- End of Section --